

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A linear block copolymer composition, comprising from 55 to 95 mass% of a vinyl aromatic hydrocarbon and from 5 to 45 mass% of a conjugated diene as monomer units;

wherein:

the linear block copolymer composition is a mixture ~~of~~ comprising linear block copolymers having at least three types of polymer blocks with different molecular weights represented by the following formula:



where S is a polymer block comprising a vinyl aromatic hydrocarbon as monomer units, and B is a polymer block consisting of conjugated diene monomer units;

a molecular weight distribution ( $M_w/M_n$ ) of a mixture of the polymer blocks is within a range of from 3.35 to 6;

in a gel permeation chromatogram of the mixture of the polymer blocks,  $M_1/M_2$  is within a range of from 12.5 to 25, where  $M_1$  is a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of a whole peak area, and  $M_2$  is a smallest peak top molecular weight among peak top molecular weights of 50,000 or less corresponding to peaks forming at least 20% of the whole peak area; and

~~in a gel permeation chromatogram of the linear block copolymer composition,  $M_3/M_4$  is within a range of from 2.5 to 4.5, where  $M_3$  is a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of a whole peak area, and  $M_4$  is a smallest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 15% of the whole peak area~~ the linear block copolymer composition is obtained by:

preparing a polymer system by carrying out anionic polymerization of a first charge of a vinyl aromatic and an initiator;

adding a second charge of a vinyl aromatic hydrocarbon and an initiator to the polymerization system;

adding a third charge of a vinyl aromatic hydrocarbon and an initiator to the polymerization system, the first, second, and third charges resulting in formation three types of vinyl aromatic hydrocarbon blocks having different peak top molecular weights;

adding a fourth charge of a conjugated diene;

adding a fifth charge of a vinyl aromatic hydrocarbon; and

inactivating all active terminals of the obtained polymers.

Claim 2 (Previously Presented): The linear block copolymer composition according to Claim 1, wherein:

in a gel permeation chromatogram of a mixture of the polymer blocks, a proportion of a number of moles of S1 to a sum of the number of moles of S1 and a number of moles of S2 is within a range of from 5 to 25 mol%;

S1 is a component corresponding to the largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of the whole peak area; and

S2 is a component corresponding to the smallest peak top molecular weight among peak top molecular weights of 50,000 or less corresponding to peaks forming at least 20% of the whole peak area.

Claim 3 (Previously Presented): The linear block copolymer composition according to Claim 1 or 2, wherein M2 is within a range of from 4,500 to 20,000.

Claim 4 (Previously Presented): The linear block copolymer composition according to Claim 1, wherein M1 is within a range of from 90,000 to 200,000.

Claim 5 (Previously Presented): The linear block copolymer composition according to Claim 1, wherein, in a gel permeation chromatogram of the linear block copolymer composition, a molecular weight distribution (Mw/Mn) of a component corresponding to a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of the whole peak area, is less than 1.03.

Claim 6 (Cancelled).

Claim 7 (Previously Presented): The linear block copolymer composition according to Claim 1, wherein, in a gel permeation chromatogram of the linear block copolymer composition, a peak top molecular weight of a component corresponding to a peak having a largest peak area is within a range of from 120,000 to 250,000.

Claim 8 (Previously Presented): A composition, comprising:  
the linear block copolymer composition according to Claim 1; and  
a thermoplastic resin other than the linear block copolymer composition.

Claim 9 (Previously Presented): The composition according to Claim 8, wherein a mass ratio of the linear block copolymer composition to the thermoplastic resin is from 30/70 to 70/30.

Claim 10 (Previously Presented): The composition according to Claim 8, wherein the thermoplastic resin is a polystyrene polymer.

Claim 11 (Previously Presented): The composition according to Claim 1, wherein the vinyl aromatic hydrocarbon monomer unit is styrene, and the conjugated diene monomer unit is butadiene.

Claim 12 (New): The composition according to Claim 1, wherein, in a gel permeation chromatogram of the linear block copolymer composition, M3/M4 is within a range of from 2.5 to 4.5, where M3 is a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of a whole peak area, and M4 is a smallest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 15% of the whole peak area.

Claim 13 (New): A linear block copolymer composition, comprising from 55 to 95 mass% of a vinyl aromatic hydrocarbon and from 5 to 45 mass% of a conjugated diene as monomer units;

wherein:

the linear block copolymer composition is a mixture comprising linear block copolymers having at least three types of polymer blocks with different molecular weights represented by the following formula:



where S is a polymer block comprising a vinyl aromatic hydrocarbon as monomer units, and B is a polymer block consisting of conjugated diene monomer units;

a molecular weight distribution ( $M_w/M_n$ ) of a mixture of the polymer blocks is within a range of from 3.35 to 6;

in a gel permeation chromatogram of the mixture of the polymer blocks,  $M_1/M_2$  is within a range of from 12.5 to 25, where  $M_1$  is a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of a whole peak area, and  $M_2$  is a smallest peak top molecular weight among peak top molecular weights of 50,000 or less corresponding to peaks forming at least 20% of the whole peak area; and

the linear block copolymer composition is obtained by:

preparing a polymer system by carrying out anionic polymerization of a first charge of a vinyl aromatic and an initiator;

adding a second charge of a vinyl aromatic hydrocarbon and an initiator to the polymerization system;

adding a third charge of a vinyl aromatic hydrocarbon and an initiator to the polymerization system, the first, second, and third charges resulting in formation three types of vinyl aromatic hydrocarbon blocks having different peak top molecular weights;

adding a fourth charge of a conjugated diene;

adding a fifth charge of a vinyl aromatic hydrocarbon;

inactivating a portion of active terminals of the obtained polymers;

adding a sixth charge of a vinyl aromatic hydrocarbon; and

inactivating all remaining active terminals of the obtained polymers.

Claim 14 (New): The linear block copolymer composition according to Claim 13, wherein:

in a gel permeation chromatogram of a mixture of the polymer blocks, a proportion of a number of moles of S1 to a sum of the number of moles of S1 and a number of moles of S2 is within a range of from 5 to 25 mol%;

S1 is a component corresponding to the largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of the whole peak area; and

S2 is a component corresponding to the smallest peak top molecular weight among peak top molecular weights of 50,000 or less corresponding to peaks forming at least 20% of the whole peak area.

Claim 15 (New): The linear block copolymer composition according to Claim 13 or 14, wherein M2 is within a range of from 4,500 to 20,000.

Claim 16 (New): The linear block copolymer composition according to Claim 13, wherein M1 is within a range of from 90,000 to 200,000.

Claim 17 (New): The linear block copolymer composition according to Claim 13, wherein, in a gel permeation chromatogram of the linear block copolymer composition, a molecular weight distribution ( $M_w/M_n$ ) of a component corresponding to a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of the whole peak area, is less than 1.03.

Claim 18 (New): The linear block copolymer composition according to Claim 13, wherein, in a gel permeation chromatogram of the linear block copolymer composition, a

peak top molecular weight of a component corresponding to a peak having a largest peak area is within a range of from 120,000 to 250,000.

Claim 19 (New): A composition, comprising:

the linear block copolymer composition according to Claim 13; and

a thermoplastic resin other than the linear block copolymer composition.

Claim 20 (New): The composition according to Claim 19, wherein a mass ratio of the linear block copolymer composition to the thermoplastic resin is from 30/70 to 70/30.

Claim 21 (New): The composition according to Claim 19, wherein the thermoplastic resin is a polystyrene polymer.

Claim 22 (New): The composition according to Claim 13, wherein the vinyl aromatic hydrocarbon monomer unit is styrene, and the conjugated diene monomer unit is butadiene.

Claim 23 (New): The composition according to Claim 13, wherein, in a gel permeation chromatogram of the linear block copolymer composition,  $M3/M4$  is within a range of from 2.5 to 4.5, where  $M3$  is a largest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 30% of a whole peak area, and  $M4$  is a smallest peak top molecular weight among peak top molecular weights corresponding to peaks forming at least 15% of the whole peak area.